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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,712	03/04/2002	Nagabhushana Sindhushayana	020180	4802

23696 7590 06/02/2004

Qualcomm Incorporated
Patents Department
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EXAMINER

ODOM, CURTIS B

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/090,712

Applicant(s)

SINDHUSHAYANA ET AL.

Examiner

Curtis B. Odom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-108 is/are pending in the application.
- 4a) Of the above claim(s) 27-45, 72-90, and 100-108 is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26, 46-71, and 91-99 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - a. It is suggested the legal phraseology “said” be deleted from the instant specification.
 - b. In section 1016, the word “form” is suggested to be changed to “from”.

Appropriate correction is required.

Claim Objections

2. Claims 7 and 52 are objected to because of the following informalities: The phrase “and at least one reference signal” is suggested to be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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4. Claims 1-26, 46-71, and 91-99 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1-26, 46-71, and 91-99 recite the term “quality metric margin”. The term “quality metric margin” was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. However, it is the understanding of the examiner that what is meant by the term “quality metric margin” in the claims is referred to as “transmission power margin” in the specification (sections 1056-1073). Therefore, it is suggested that term “quality metric margin” recited in the claims be replace with the term “transmission power margin” not only to overcome this rejection, but also for clarification purposes.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claims 1, 6-8, 11, 46, 51-53, and 56 are rejected under 35 U.S.C. 102(e) as being anticipated by Bremer et al. (U. S. Patent No. 6, 647, 058).

Regarding claim 1, Bremer et al. disclose a method for estimating a reverse link maximum data rate, comprising:

determining (Fig. 2, block 14, column 5, lines 38-51) at a source of data a quality metric (SNR) of a link over which data is to be transmitted;

modifying (Fig. 2, block 12, column 6, lines 1-43) the quality metric by a quality metric margin (transmission power), wherein changing the transmission power modifies the quality metric (column 8, lines 54-57);

determining (column 6, line 64-column 7, line 23) a maximum data rate of data in accordance the modified quality metric, wherein the maximum data rate is determined using the minimum transmission power level detected when modifying the quality metric (column 6, lines 44-46).

Regarding claim 6, which inherits the limitations of claim 1, Bremer et al. discloses receiving at a source of data at least one signal and determining the quality metric in accordance with the received at least one signal (column 5, lines 38-51), wherein the test pattern is the at least one signal.

Regarding claim 7, which inherits the limitations of claim 1, Bremer et al. discloses receiving at a source of data at least one first reference signal and determining the quality metric in accordance with the received at least one reference signal (column 5, lines 38-51), wherein the test pattern is the at least one reference signal.

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Regarding claim 8, which inherits the limitations of claim 1, Bremer et al. discloses receiving at a source of data a feedback signal and determining the quality metric in accordance with the received feedback signal (column 5, lines 38-51), wherein the test pattern is the feedback signal.

Regarding claim 11, which inherits the limitations of claim 1, Bremer et al. discloses modifying the quality metric by a pre-determined quality metric margin (column 6, lines 1-43) wherein the predetermined transmission power levels are stored in a table.

Regarding claims 46, 51-53, and 56, the claimed apparatus includes features corresponding to the above rejection of claims 1, 6-8, and 11 which is applicable hereto.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-5, 9, 10, 47-50, 54, and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bremer et al. (U. S. Patent No. 6, 647, 058).

Regarding claim 2, which inherits the limitations of claim 1, Bremer et al. does not disclose processing the quality metric using a predictor. However, it would have been obvious that once the quality metric was determined that the metric could have been processed in many

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different ways using many different devices. Thus, processing the quality metric using a predictor is deemed a design choice and does not constitute patentability.

Regarding claims 3-5, which inherit the limitations of claim 2, Bremer et al. does not disclose filtering the quality metric by a linear or non-linear filter, wherein the non-linear filter comprises a peak filter. However, it would have been obvious to one skilled in the art at the time the invention was made to filter the quality metric in order to remove unwanted components from the quality metric to give a more accurate quality metric which would lead to more efficient processing of the quality metric. Thus, claims 3-5 do not constitute patentability.

Regarding claims 9 and 10, which inherit the limitations of claim 1, Bremer et al. does not disclose determining a quality metric in accordance with a received at least one signal a received feedback signal or determining a quality metric in accordance with a received reference signal and a received feedback signal. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made that a quality metric is simply a measurement of quality of a communications channel or link. Quality metrics can be SNR, path loss, or carrier-to-interference ratio. There are many well known techniques used to calculate these quality metrics; thus, the technique at which the quality metric is calculated is deemed a design choice and does not constitute patentability.

Regarding claims 47-50, 54, and 55, the claimed apparatus includes features corresponding to the above rejection of claims 2-5, 9, and 10 which is applicable hereto.

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Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sato (U. S. Patent No. 6, 414, 948) discloses determining transmission power based upon a quality metric.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 703-305-4097. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom
May 19, 2004

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